<center>**REMARKS**</center>

Claims 1-20 were examined and reported in the Office Action. Claims 1-20 are rejected. Claims 1-20 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I.   35 U.S.C. § 103(a)

A.   It is asserted in the Office Action that claims 1-3, 5-20 are rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over U. S. Patent No. 5,784,699 issued to McMahon et al. ("McMahon") and further in view of Donahue et al. in *Hardware Support for Fast and Bounded-time Storage Allocation*, March 22, 2002 ("Donahue"), and U. S. Publication No. 2002/0144073 by Trainin et al. ("Trainin"), *Data Structures and Algorithms* by John Morris ("doc. 1") and *Linked List Basics* by Nick Parlante, introduced for evidentiary references ("doc. 2"). Applicant traverses the aforementioned rejection for the following reasons.

According to MPEP §2142

> [t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Further, according to MPEP §2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "*All words in a claim must be considered in judging the patentability of that claim against the prior art.*" (In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), emphasis added.)

Applicant's amended claim 1 contains the limitations of:

> a first head location information in the plurality of head
> location information and a second head location information
> are used for allocation of different byte sizes in the data
> memory, and a number of entries of the free list memory is
> the same as a number of entries of the data memory and the
> number of entries of the free list memory and the number of
> entries of the data memory have a 1:1 corresponding
> relationship.

Applicant' amended claim 14 contains the limitations of

> a first head location information in the plurality of head
> location information and a second head location information
> are used for allocation of different byte sizes in the data
> memory, and a number of entries of the free list memory is
> the same as a number of entries of the data memory and the
> number of entries of the free list memory and the number of
> entries of the data memory have a 1:1 corresponding
> relationship.

Applicant's amended claim 17 contains the limitations of

> a first head location information in the plurality of head
> location information and a second head location information
> are used for allocation of different byte sizes in the data
> memory, and a number of entries of the free list memory is
> the same as a number of entries of the data memory and the
> number of entries of the free list memory and the number of
> entries of the data memory have a 1:1 corresponding
> relationship.

It is asserted in the Office Action that McMahon discloses that the "number of entries of
the free list memory is the same as a number of entries of the data memory and the number of
entries of the free list memory and the number of entries of the data memory have a 1:1
corresponding relationship" and cites McMahon col. 6, line 65 to col. 7, line 2). This citation,
however, asserts that "FIG. 3A illustrates a bit map index to indicate the status of a plurality of
free lists. For this embodiment, a bit map index 300 includes "n" bit flags, one for each of "n"
free lists. The bit flags in the bit map index 300 indicate availability of a memory block in the
corresponding free list. Thus, for an example of 1024 free lists as described above, the bit map

index includes 1024 bit flags." This citation, however, only relates to: 1) status of free lists, 2) flags for each free list (e.g., 1024), and 3) availability of a free block in a specific free list. This citation has nothing to do with the "number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship." Moreover, McMahon's claim 11 recites "generating a plurality of free lists, one for each slot, such that each free list identifies memory blocks, corresponding to a slot size, not currently in use." That is, each free list corresponds to a specific size, not all the entries (i.e., same number of entries) in a data memory.

Further, according to the summary of McMahon an "allocator in a computer assigns portions of memory into a large number of slots, such that each slot includes memory blocks of equal size. A plurality of free lists, one for each slot, identify memory blocks, corresponding to the slot size, not currently in use in the computer." That is, if each slot includes memory blocks, and there are a plurality of free lists for each memory slot, then there cannot be the same number of entries in a single free list that equals the number of entries in a data memory as the data memory has more entries than just the slots. It isn't that each block size has a free list. The free lists correspond to different size blocks. The claim limitation deals with number of entries in the data memory. Therefore, McMahon does not teach, disclose or suggest Applicant's amended claim 1 limitations of the "number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship." Thus, even if McMahon is combined with the other references, the resulting invention would still not teach, disclose or suggest Applicant's amended claim 1 limitations of the "number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship."

Therefore, even if McMahon, Donahue, doc. 1 and doc. 2 were combined, the resulting invention would still not include all of Applicant's claimed limitations. Moreover, by viewing

the disclosures of McMahon, Donahue, doc. 1 and doc. 2, one can not jump to the conclusion of obviousness without impermissible hindsight. According to MPEP 2142,

> [t]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Applicant submits that without first reviewing Applicant's disclosure, no thought, whatsoever, would have been made to

> a number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship.

Neither McMahon, Donahue, doc. 1 and doc. 2, and therefore, nor the combination of the four, teach, disclose or suggest the limitations contained in Applicant's amended claims 1, 14 and 17, as listed above. Since neither McMahon, Donahue, doc. 1 and doc. 2, and therefore, nor the combination of the four, teach, disclose or suggest all the limitations of Applicant's amended claims1, 14 and 17, Applicant's amended claims 1, 14 and 17 are not obvious over McMahon in view of Donahue, doc. 1 and doc. 2 since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claims that directly or indirectly depend on amended claims 1 and 14, namely claims 2-3 and 5-13, and 15-19, respectively, would also not be obvious over the cited combination of prior art for the same reason. And, as claim 20 directly or

indirectly depends on claims 14 and 17, claim 20 would also not be obvious over the cited combination of prior art for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1-3, and 5-20 is respectfully requested.

B.   It is asserted in the Office Action that claim 4 is rejected in the Office Action under 35 U.S.C. § 103(a), as being unpatentable over McMahon and Donahue, and further in view of Murdocca et al. ("Murdocca") *Principles of Computer Architecture, 2000.*

Applicant's amended claim 4 indirectly depends on amended claim 1. Applicant has addressed claim 1 regarding McMahon and Donahue above in section IA.

Murdocca is relied on for inherently teaching that an address value is calculated. Murdocca, however, does not teach, disclose or suggest Applicant's amended claim 1 limitations of

> a number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship.

As asserted above in section IA, neither McMahon nor Donahue teach, disclose or suggest Applicant's amended claim 1 limitations of "a number of entries of the free list memory is the same as a number of entries of the data memory and the number of entries of the free list memory and the number of entries of the data memory have a 1:1 corresponding relationship."

Therefore, since neither McMahon, Donahue, Murdocca, and therefore, nor the combination of the three, teach, disclose or suggest all the limitations of Applicant's amended claim 1, Applicant's amended claim is not obvious over McMahon in view of Donahue and Murdocca since a *prima facie* case of obviousness has not been met under MPEP §2142. Additionally, the claim that indirectly depends from amended claim 1, namely claim 4, would also not be obvious over McMahon in view of Donahue and Murdocca for the same reason.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection for claim 4 is respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-20 patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

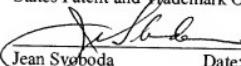Respectfully submitted,

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Dated: May 4, 2007

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CERTIFICATE OF TRANSMISSION
I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below to the United States Patent and Trademark Office.

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Jean Svoboda   Date: May 4, 2007